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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,587

04/11/2006

Stephan Oliver Mietens

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

PE, GEEPY

ART UNIT

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2621

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,587	Applicant(s) MIETENS, STEPHAN OLIVER	
	Examiner Geepy Pe	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

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ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 and 2 of copending Application No. 10/578,072. Although the conflicting claims are not identical, they are not patentably distinct from each other because of Table 1 below.

Instant Application	10/578,072
<p>1. A video encoding method provided for encoding an input image sequence consisting of successive groups of frames, <u>said method comprising for each successive frame, called current frame and</u> subdivided into blocks, the steps of:</p> <p>estimating a motion vector for each block of the current frame;</p> <p>generating a predicted frame using said motion vectors respectively associated to the blocks of the current frame;</p> <p>applying to a difference signal between the current frame and the last predicted frame a transformation sub-step producing a plurality of coefficients and followed by a quantization sub-step of said coefficients;</p> <p>coding said quantized coefficients;</p>	<p>1. A video encoding method provided for encoding an input image sequence consisting of successive groups of frames themselves subdivided into blocks, said method comprising the steps of:</p> <p>preprocessing said sequence on the basis of a so-called content-change strength (CCS) computed for each frame by applying some predetermined rules (<i>this limitation is further down in the instant application</i>);</p> <p>estimating a motion vector for each block of the frames;</p> <p>generating a predicted frame using said motion vectors respectively associated to the blocks of the current frame;</p> <p>applying to a difference signal between the current frame and the last predicted frame a transformation sub-step producing a plurality</p>

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<p><u>wherein a preprocessing step is applied to each successive current frame, said preprocessing step itself comprising the sub-steps of:</u></p> <p><u>a computing sub-step, provided for computing for each frame a so-called content-change strength (CCS);</u></p> <p><u>a defining sub-step, provided for defining from the successive frames and the computed content-change strength the structure of the successive groups of frames to be encoded;</u></p> <p><u>a storing sub-step, provided for storing the frames to be encoded in an order modified with respect to the order of the original sequence of frames.</u></p>	<p>of coefficients and followed by a quantization sub-step of said coefficients;</p> <p>coding said quantized coefficients;</p> <p>wherein said CCS is used in said quantization sub-step for modifying the quantization factor used in said quantization sub-step, said CCS and the quantization factor increasing or decreasing simultaneously.</p>
<p>3. A video encoding device provided for encoding an input image sequence consisting of successive groups of frames, <u>said device comprising the following means, applied to each successive frame, called current frame and subdivided into blocks:</u></p> <p>estimating means, provided for estimating a motion vector for each block <u>of the current frame</u>;</p> <p>generating means, provided for generating a predicted frame on the basis of said motion vectors respectively associated to the blocks of the current frame;</p> <p>transforming and quantizing means, provided for applying to a difference signal between the current frame and the last predicted frame a transformation producing a plurality of coefficients and followed by a quantization of said coefficients;</p> <p>coding means, provided for encoding said quantized coefficients;</p> <p><u>wherein said encoding device also comprises</u></p>	<p>2. A video encoding device provided for encoding an input image sequence consisting of successive groups of frames themselves subdivided into blocks, said device comprising the following means:</p> <p>preprocessing means, provided for preprocessing said sequence on the basis of a so-called content-change strength (CCS) computed for each frame by applying some predetermined rules (<i>this limitation is further down in the instant application</i>);</p> <p>estimating means, provided for estimating a motion vector for each block of the frames;</p> <p>generating means, provided for generating a predicted frame on the basis of said motion vectors respectively associated to the blocks of the current frame;</p> <p>transforming and quantizing means, provided for applying to a difference signal between the current frame and the last predicted frame a transformation producing a plurality of coefficients and followed by a quantization of said coefficients;</p>

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<u>preprocessing means applied to each successive current frame and comprising itself the following means:</u> <u>computing means, provided for computing for each frame a so-called content-change strength (CCS);</u> <u>defining means, provided for defining from the successive frames and the computed content-change strength the structure of the successive groups of frames to be encoded;</u> <u>storing means, provided for storing the frames to be encoded in an order modified with respect to the order of the original sequence of frames.</u>	coding means, provided for encoding said quantized coefficients; wherein an output of said preprocessing means is received on an input of said transformation and quantization means for modifying on the basis of said CCS the quantization factor used in said quantization sub-step, said CCS and the quantization factor increasing or decreasing simultaneously.
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Table 1

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims **1-4** are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al.

("Motion compensated subband coding with scene adaptivity"; hereinafter Lee).

Re. **claim 1**, Lee teaches a video encoding method provided for encoding an input image sequence consisting of successive groups of frames, said method comprising for each successive frame, called current frame and subdivided into blocks (Lee: Fig. 1), the steps of: estimating a

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motion vector for each block of the current frame (Lee: pg. 279, lines); generating a predicted frame using said motion vectors respectively associated to the blocks of the current frame (Lee: pg. 279, section 2, lines 1-2); applying to a difference signal between the current frame and the last predicted frame a transformation sub-step producing a plurality of coefficients and followed by a quantization sub-step of said coefficients (Lee: pg. 279, section 2, lines 7-9); coding said quantized coefficients (Lee: pg. 279, section 2, lines 10-11); wherein a preprocessing step is applied to each successive current frame, said preprocessing step itself comprising the sub-steps of: a computing sub-step, provided for computing for each frame a so-called content-change strength (CCS) (Lee: pg. 279, lines 5-10); a defining sub-step, provided for defining from the successive frames and the computed content-change strength the structure of the successive groups of frames to be encoded (Lee: pg. 279, lines 5-10); a storing sub-step, provided for storing the frames to be encoded in an order modified with respect to the order of the original sequence of frames (Lee: Fig. 1).

Re. **claim 2**, Lee teaches that said CCS is defined on the basis of the following rules: (a) the measured strength of content change is quantized to levels; (b) I-frames are inserted at the beginning of a sequence of frames having content-change strength (CCS) of level 0; (c) P-frames are inserted before a level increase of CCS occurs; (d) P-frames are inserted after a level decrease of CCS occurs (Lee: pg. 280, lines 2-4: i.e., the instant claim is interpreted in the alternative and case (b) has been chosen as the rule).

Re. **claims 3 and 4**, the claim(s) recites analogous limitations to claim(s) 1 and 2, respectively, above, and is/are therefore rejected on the same premise.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geepy Pe whose telephone number is (571)-270-3703. The examiner can normally be reached on Monday - Friday, 7:00AM - 3:30PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G. P./

/Geepy Pe/

Examiner, Art Unit 2621

/Andy S. Rao/

Primary Examiner, Art Unit 2621

June 10, 2010

/Mehrdad Dastouri/

Supervisory Patent Examiner, Art Unit 2621